REMARKS

In the Office Action mailed June 26, 2003 (Paper No. 3), the Examiner rejected Claim 5 of the pending application under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. In addition, the Examiner further rejected Claims 1-3, 5-6, and 8-9 of the pending application under 35 U.S.C. §102(e) as being anticipated by Miki et al. (US Patent No. 6,309,894). Moreover, the Examiner further rejected Claim 3 of the pending application under 35 U.S.C. §103(a) as being unpatentable over Miki et al. (US Patent No. 6,309,894) in view of Moise et al. (US Patent No. 6,211,035). By this paper, the Applicant believes that the claims as amended herein distinguish the art of record. Therefore, the Applicant respectfully requests reconsideration of the above-identified application in the light of the amendments and remarks contained herein. Furthermore, the Applicant has added Claims 10-47 to further highlight the subject matter with which the Applicant regards as the invention.

In the Office Action, the Examiner rejected Claim 5 of the pending application under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. However, the Applicant has amended Claim 5 to distinctly claim the subject matter which the Applicant regards as the invention, wherein "the conducting layer" as been changed to "the second conducting layer". Therefore, by this paper, the Applicant respectfully requests reconsideration of Claim 5 as amended with express allowance of the same.

In the Office Action, the Examiner rejected Claim 1 of the pending application under 35 U.S.C. §102(e) as being anticipated by Miki et al. '894. However, the Applicant notes that Miki fails to disclose a conductor-insulator-conductor (CIC) sandwich having the first conducting layer, the first insulating layer, and the second conducting layer define a three-dimensional contour in a manner as disclosed by the Applicant in amended Claim 1. The advantage of the Applicant's claimed invention is that the three-dimensional contour comprises a greater surface area to thereby increase the capacitance of the CIC sandwich. Miki does not teach this. In fact, Miki teaches (column 4, line 11 to column 6, line 34) and illustrates (Figure 1) a flat layered structure having a reduced capacitance due to a smaller surface area.

In addition, the Applicant notes that Miki fails to disclose a CIC sandwich having an oxygen-rich interface layer interposed between the first insulating layer and the second

conducting layer in a manner as disclosed by the Applicant in amended Claim 1. The advantage of the Applicant's claimed invention is that the oxygen-rich interface layer acts as a sink for absorbing oxygen vacancies that migrate from the first insulating layer so as to reduce oxygen vacancies at the interface layer and so as to reduce the concentration of oxygen vacancies of the first insulating layer. Miki does not teach this. In fact, Miki teaches (column 4, lines 28-33) that the upper electrode is fully repaired by annealing in an oxygen atmosphere. Also, Miki teaches (column 7, lines 49-52) the advantage of this invention is obtained in principle by performing the oxygen annealing step after forming the upper electrode. Unfortunately, performing the oxygen annealing step reduces manufacturing efficiency by requiring additional processing steps. Thus, the Applicant's claimed invention is an improvement over Miki's disclosed invention due to the reduced need for the oxygen annealing step.

Clearly, Miki expressly teaches away from the Applicant's claimed invention as defined in amended Claim 1 by forming a device with flat layers and using the oxygen annealing step to repair defects in the upper electrode. Therefore, since Miki expressly teaches away from the Applicant's claimed invention, there can be no suggestion to modify Miki's device with the teachings of the other cited references to thereby produce the advantageous results of the Applicant's claimed invention. Moreover, the Moise et al. reference further fails to teach the oxygen rich interface layer. Thus, for these reasons disclosed herein, the Applicant submits that Claim 1 as amended herein is patentable over the art of record and respectfully requests express allowance of the same. Additionally, the Applicant respectfully requests reconsideration of the remaining claims 2-9, which further define patentable subject matter and are allowable due to their dependencies on Claim 1. Furthermore, the Applicant has added Claims 10-47 to further highlight the subject matter with which the Applicant regards as the invention.

SUMMARY

From the foregoing, the Applicant believes that the present application is in condition for allowance, and the Applicant requests the prompt allowance of the same. The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the application in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call the undersigned at the number shown below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 10/24/03

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